
Development of a Work Plan for the Collaborative Delivery of Public Health Education to Rural and Aboriginal Communities



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Report Prepared for the Public Health Agency of Canada

on behalf of

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Memorial University
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Table of Contents

Acknowledgment	v
Executive Summary	vi
Overview	1
Rationale	1
Activities	2
Deliverable	3
Literature Review: Issues Identified	4
Training Needs	4
Core Competencies	5
Learning Needs	6
Community Capacity	9
Components of a Successful Collaboration	9
Public Health Education Challenges	10
Summary	12
Scan	14
Canadian Programs	15
Graduate Programs	15
Undergraduate Programs	22
College Programs	27
Aboriginal and Rural Programs	33
Workforce Training	36
Gaps	39

Collaborative Health Education Models	41
Nurse Practitioner Program (Ontario)	41
Closer to Home Health Human Resources Initiative (Nunavut)	42
Rocky Mountain Public Health Education Consortium (United States) ...	43
Consortium of Eastern Ohio Master of Public Health (United States)	44
APHA Public Health E-Learning Initiatives (United States)	45
Continuous Public Health Education for Nurses (European Union)	45
Turning Points Initiative (United States)	46
University of the Arctic (Circumpolar Nations)	47
Workplan	48
Vision	48
Guiding Principles	48
Plan of Action	49
Tentative Timelines for 2006 Workplan	52
References	56

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Executive Summary



Providing education that fully addresses the public health needs of rural and Aboriginal Canadians is a significant challenge. Given the complex issues and diverse delivery environments involved, a coherent, integrated and comprehensive approach is required. Consequently, Lakehead University, Memorial University, the University of Northern British Columbia and the University of Saskatchewan, together with two of their affiliated medical programs, the Northern Ontario School of Medicine and British Columbia's Northern Medical Program – all of whom have a clear rural and Aboriginal mandate – are exploring ways to collaborate on public health education.

With support from the Public Health Agency of Canada, they commissioned the development of a work plan, informed by a focussed review of pertinent literature and a scan of existing programs, that will allow them to pursue their objective – to improve public health by providing rural and Aboriginal relevant programs. This report presents the results of the literature search, scan and partners' discussion on the topic of a targeted public health education strategy. It examines various issues that emerged, as well as the ways suggested to meet training needs. The information gathered provides a sufficient basis for a do-able work plan, which the partners can refine and elaborate as they move forward. This document is intended as a stimulus for further discussion.

The literature search was issue driven: core competencies, learning needs, collaborative partnerships, and community responsive capacity building. The notion of core competencies is an important concept within public health, used both to determine training needs and to establish curricula content. Various public health stakeholders have identified sets of competencies that they deem to be core; there are overlaps between their lists, but not consensus about them. In part this reflects a recognition that a degree of context and role specificity is inherent within the public health domain.

There are two levels of learning needs; for those preparing to enter practice and the continuing education needs of those already working in the field. For the former, awareness of conditions in rural and Aboriginal settings is paramount. The latter face a number of challenges, many linked to the relative isolation of their practice environment. High costs, difficulty accessing programs, scheduling conflicts and techno-phobia are among the barriers cited. With respect to an educational collaboration, the requirements are clear: vision and a supportive institutional culture; leadership, planning and communication; infrastructure and capacity. Add to these, in the case of rural and Aboriginal communities, programming that is informed by consultation. This is a reciprocal process; it contributes to the communities' capacity as well as ensuring that the program content responds to needs.

The environmental scan had a dual focus. First, it sought out models of collaborative education that have a public health orientation, at least to some extent. A few of those identified are Canadian, others are American or European; it is evident that inter-institutional approaches are relatively unusual as yet. Second, the scan summarized all of the public health programs currently offered at Canada's post-secondary institutions – from community college level, through undergraduate training to graduate programs at a masters or doctoral level. The lists of options are lengthy, yet gaps remain. In particular, few programs use computer mediated modes of delivering distance education – in some ways ideal for learners in isolated settings. The scan also identified some of the public health in-service educational opportunities available.

Formulation of the proposed work plan was guided by a vision – to assist in building the capacity of populations in rural, remote and Aboriginal communities to improve their own health – and a set of principles established by the partner institutions. It sets out a plan of action involving a number of steps under the following rubrics: administrative considerations; needs assessment; stakeholder consultations; inventory of resources at each university; consortia agreement; delivery model; student level; and communication pathways, both internal and external. These are not intended as definitive, but rather as parameters within which the partners might proceed.

Overview



Four Canadian universities, each with a particular rural and northern mandate, together with two of their affiliated medical schools, have initiated discussion about possible collaborative approaches to address public health education needs in rural, isolated and Aboriginal contexts. With support from the Public Health Agency of Canada, the partners (Lakehead University, Memorial University, Northern Ontario School of Medicine, Northern Medical Program, University of Northern British Columbia and the University of Saskatchewan) commissioned the development of a work plan that would allow them to pursue their objective. These institutions share one goal – to improve public health by providing rural and Aboriginal relevant programs.

Rationale

At the outset, the partners established the following four-point rationale for actively exploring targeted public health education options:

1. While many of the recent examples of threats to public health have occurred in non-urban areas (e.g., substance abuse in isolated communities, tainted water), there is a lesser local capacity to anticipate, plan for and respond quickly to these threats in rural, First Nations, Inuit and Métis contexts.
2. Although many of the recommendations from the Naylor, Kirby and Walker Reports call for greater cooperation among municipalities in setting public health policy, rural jurisdictions, First Nations, Inuit and Métis communities rarely have

the same political or community-based voice to participate in and influence this debate.

3. The recent National Consultation on a Pan-Canadian Framework for Public Health Human Resources Planning (Spasoff, 2005) gave high priority to collaboration between the education system and the regulatory system to develop a range of appropriate training options for public health professionals (e.g., short courses, Diploma, BSc, MPH/MSc, PhD; distance, part-time, full-time; continuing education; inter-professional; education including management, leadership and emerging issues).
4. Many of the existing large city-based universities in Canada are embarking on ambitious public health education and training programs. Although aspects of First Nations, Inuit, Métis and rural health education needs may be part of these programs, they are usually only a small component of the programs' focus. Moreover, the ability to engage in meaningful dialogue with stakeholders in non-urban locations is constrained.

Activities

Further, the institutional partners identified the four activities that would contribute to formulation of a comprehensive work plan. These were:

1. To review the literature on public health education learning needs and models in the areas of Aboriginal health and rural health education.
2. To do an environmental scan of public health education programs in the areas of Aboriginal and rural health.
3. To summarize key points from the meeting of the partner institutions that was held on March 9th -10th in Thunder Bay.
4. To prepare a report, incorporating a proposed work plan, based on the information obtained from the literature search, environmental scan, and group meeting discussions.

Deliverable

This report, the primary deliverable requested, contains the results of the literature search, environmental scan and partners' discussion on the topic of public health education and training needs in Canada's rural, isolated and Aboriginal communities. It examines various issues that emerged, as well as the strategies suggested to help meet these needs. The time available, about one month, limited the nature and scope of the review; undoubtedly further information will be added as the consortium continues its work. Nonetheless, the information gathered provides a sufficient basis for a do-able work plan; again, the partners will likely refine and elaborate on details within its broad parameters. Ultimately, it is intended as a stimulus for further discussion.

Literature Review: Issues Identified



To help focus the development of a work plan, a review was done of the literature on key issues potentially affecting a consortium-based strategy for public health education with a rural and Aboriginal orientation. In particular, there was an interest in understanding notions about core competencies, training needs, partnerships, and community capacity building. All of these were considered through a population and context-specific lens.

Training Needs

Training, of course, is crucial for a well-functioning public health system (Allegrante et al., 2001). Yet, large numbers of public health workers have either no preparation or inadequate, inconsistent training in public health and, consequently, little understanding of the “big picture” (Potter et al., 2000; Reynolds & Leahy, 2002). With the emergence of new threats, public health is an ever changing and evolving field; public health education has to follow suit (Sommer, 2000).

Efforts to address the current knowledge deficit are hampered by the lack of an agreed-upon set of skills that all public health professionals should possess (Potter et al., 2000). Rather, there has been a highly individualized response. Public health agencies, governments, various health disciplines, and other stakeholders have developed lists of core competencies that they deem necessary and, therefore, ought to be included in public health training (Sommer, 2000; Allegrante et al., 2001). While the content of the lists may overlap, this does not mean that consensus exists. Nevertheless, thinking in terms of competencies has become the dominant conceptual

framework, used as the basic criteria for assessing the training needs of workers currently employed in public health, as well as in the design of educational curricula.

“Competencies are defined as the knowledge, skills and abilities demonstrated by organizational or system members that are critical to the effective and efficient function of an organization or system” (Public Health Human Resources Joint Task Group [PHHRJTG], 2005). Inherent in this definition is a recognition that understanding *context* constitutes a significant component of a competent public health professional’s skill set (Allegrante et al., 2001). Consequently, educational programs must instill a sense of flexibility, thereby helping people to take workplace realities into account. There is also a need to prepare professionals to function beyond the boundaries of their disciplines, because collaboration among various professions is becoming the norm in public health.

Core Competencies

- ◆ The Advisory Committee on Population Health (ACPH) has identified five key functions of the public health system that must be addressed as core competency requirements: population health assessment, health surveillance, health promotion, disease and injury prevention, and health protection (Advisory Committee on Population Health Highlights Report, 2001).
- ◆ The Ontario Public Health Association noted that several recent reports have suggested additional areas meriting consideration, including emergency preparedness and epidemic response capacity; development and sustainability of a strong, skilled public health workforce; research and planning; as well as quality assurance activities (Sullivan & Michel, 2003).
- ◆ The PHHRJTG (2005) identified 62 competencies in seven domains: core public health sciences; analysis and assessment; policy development and program planning; partnership and collaboration; communication; socio-cultural competencies; leadership and systems approaches. Discipline-specific and technical competencies are also recognized.
- ◆ In the United States, the Association of Schools of Public Health (ASPH; 2004) initiated the development of a set of core competencies for a Master of Public Health that would encompass the spectrum of skills, knowledge, and other

attributes needed for both current and future public health practice. In all, 48 competencies were identified in the domains of biostatistics, environmental health sciences, epidemiology, health policy and management, and the social and behavioral sciences. At the present time, the project is examining cross-disciplinary competencies in the areas of communication, diversity and cultural proficiency, leadership, professionalism and ethics, program planning and assessment, and systems thinking, as well as public health biology.

Learning Needs

The authors of the *Pan-Canadian Planning Framework for Health Human Resources* (2005) argued that “[c]ontinuing professional development must be recognized as part of ‘the cost of doing business’ in healthcare.” This applies to public health as it does to every other health domain. However, the costs may be particularly high for those practitioners who work in rural, northern, remote, and Aboriginal communities (Aboriginal Nurses Association of Canada, 2002; Curran et al., 2006; Silverman et al., 2001; Tilleczek et al., 2005). Their access to continuing education is hindered by a variety of factors, such as cost, travel arrangements, allowance of time to pursue continuing education, and family obligations. Accordingly, the design and delivery of courses to meet their needs requires innovative approaches, such as using distance education technologies. Several studies have addressed the needs of health professionals working in rural parts of Canada:

- ◆ Silverman et al. (2001) surveyed the learning needs of nurses working in First Nation communities and hospitals in Canada. Areas identified under community health were communicable disease control, chronic diseases, and community development. Responses indicated that nurses’ preferred a variety of learning and teaching methods, including video- or audiotapes, discussion with their peers, attending presentations, and reading books or journals. Timing was also important: courses should be short and taught on weekends; refresher courses should be attended approximately once a year.
- ◆ A report by the Aboriginal Nurses Association of Canada (2002) noted that Aboriginal nurses are very interested in furthering their education and believe that a fully accredited Aboriginal Nursing specialization will benefit both their communities and their professional practice. A distinct subject matter dictates the development of a specialized curriculum that addresses major Aboriginal



health issues (prevalence of particular disease categories, geographical factors, cultural factors) and includes discussion of both traditional and modern (Western, European) teaching and research methodologies. The report also notes the importance of collaboration between academic institutions, corporate sponsors, government departments, and Aboriginal communities and recommends the development of an Aboriginal Nursing Summer School Program whose mandate addresses issues highlighted above. Similar principles and issues were identified in a report by Parker et al. (2002).

- ◆ Curran et al. (2006) identified factors affecting access to continuing professional education for rural health practitioners, noting that such access, in combination with professional isolation, is related to recruitment and retention issues in rural areas. The authors conducted key informant interviews and online surveys and identified best practices for improving access to continuing education for rural health care professionals, including innovative delivery methods (technology-based, tele-education), financial support (grants, subsidies), and greater collaboration among interested groups (e.g., preceptorships, professional associations, community agencies, universities, etc.).
- ◆ Tilleczek et al. (2005) recommended that continuing education in rural regions should take into account the “realities of the rural practice environment” and may require different delivery approaches and teaching strategies. Based on the results of a needs assessment completed by nurse practitioners working in rural and northern regions of Ontario, Tilleczek and associates developed five modular web-based continuing education courses – Fundamentals of Primary Health Care, Persistent Illness, Issues in Mental Health, Pharmacotherapeutics, and Emergency Health Care in Rural Settings. An evaluation found variability in ratings among courses, but agreement by a majority of learners that the modular design was helpful to learning.

All of the above studies addressed barriers and challenges in pursuing continuing education faced by health practitioners in rural practice. Curran et al. (2006) noted that geographic isolation was identified by 84.5% of respondents as a barrier. In the same vein, 73.2% cited a lack of financial support and 69.6% mentioned the lack of remuneration for time off. Other highlighted factors included the lack of locum support, lack of support from management, high cost, poor technological and telecommunication infrastructure, as well as the lack of skills to utilize technology. Silverman et al. (2001) cited distance, expenses (tuition, food, lodging), inability to take time off work, family



duties, and lack of interest in the topic being taught as additional impediments to continuing education for nurses who work in remote and isolated northern communities.

Obviously, in these Canadian studies, financial disparities created by learners' place of residence are a major concern. Similarly, research on local public health agencies (LPHAs) in the United States noted that only 69% of rural LPHAs had a continuing education budget in comparison with 81% of metropolitan LPHAs (Hajat et al., 2003). Moreover, there was a different pattern of spending on training in rural and urban LPHAs. In rural agencies, program-specific training was identified as the most important need and a larger percentage of training budgets was spent on clinical personnel relative to non-clinical staff; in metropolitan areas the pattern of spending was reversed. Thus, non-clinical staff in rural areas may lack access to public health training.

The public health literature contains a number of calls for targeted education initiatives. Although few comprehensive public health workforce learning needs assessments have been conducted, there are several examples of discipline-specific and interdisciplinary assessments.

- ◆ Assessments of public health nursing needs emphasize required improvements in undergraduate, graduate and continuing education opportunities (Radzimirski, 2005; Zahner and Gredig, 2005). Undergraduate programs need to give students more public health experience and additional population-focussed concepts and skills. Graduate and continuing education programs also must be improved to ensure that they are accessible to those in the public health workforce. Enhanced public health content, more programs, better marketing, flexible scheduling, distance education, and affordable programs are cited as priorities.
- ◆ Potter et al. (2000) assessed training needs through the use of a “universal” competencies framework with a view to establishing a model training agenda; they utilized 39 competencies distributed among six disciplines that had been identified by a faculty-public health agency forum. Input was obtained from public health professionals and academics at national, state, and local levels in six northeastern states. Results showed that only a subset of the universal competencies was represented in the resulting model training agenda. Competencies given high priority varied significantly by agency. Overall, those given high priority tended to be of general usefulness in the workforce; those



assigned low priority were useful to smaller groups or specialized workers. The project demonstrated that “universal” competencies could serve as a framework for developing a curriculum that is sensitive to local training needs while simultaneously conforming to national standards.

Community Capacity

In developing community responsive educational programs it is vital to consult with those whose health and well-being are the focus of concern. This is a reciprocal process. On one hand, engaging community members in this way empowers them and fosters their capacity to deal with public health issues (Povan, 2003; Dressendorfer et al., 2005). On the other hand, it ensures that program content is grounded and relevant to a given environment. Moreover, because consultation should be on-going, changes are recognized and reflected in an evolving curricula.

Components of a Successful Collaboration

Successful collaboration overcomes the risks inherent to planning in isolation (Federal/Provincial/Territorial Advisory Committee on Health Delivery and Human Resources, 2005). The following components have proven successful when developing and maintaining collaboration (Canadian Institute of Health Research, 2002; PHRED, 2002):

- ◆ **Vision and Culture:** A clear vision, purpose and objectives should be adopted by the group. By maintaining a commitment to public health and the multiple stakeholders involved, the group is encouraged to focus on their mandate.
- ◆ **Relationships:** It is important to have various perspectives present in the collaborative group and for consortium members to recognize their interdependence, while valuing the opportunity for interaction.
- ◆ **Leadership, and Planning and Communication:** Representatives with a passion for collaboration and skills in facilitation are of great benefit to collaborative teams. Planning should occur in steps, taking advantage of timing and opportunities to advance the group’s shared vision. Communication strategies



should be planned to facilitate internal collaboration and to disseminate results to the community.

- ◆ **Infrastructure and Capacity:** It is important to build on existing strengths and infrastructure, while developing new structures, partnerships and networks. In order to ensure sustainability and develop the necessary accountability structures, adequate resources are required. By maintaining flexibility in the collaborative group, proper and timely response and the ability to collaborate with those outside of the team are supported.

Public Health Education Challenges

The Pan-Canadian Public Health Education Initiative brought together public health practitioners from various levels of government, as well as representatives from academic institutions across the country, to discuss training needs of the Canadian public health workforce. Three themes appeared repeatedly: defined competencies, well-developed and open career paths, and comprehensive training. The main points under each can be summarized as follows:

Defined Competencies

Core competencies should be defined and agreed upon by a variety of stakeholders and satisfy both current and future needs of public health practitioners. It is recognized that these competencies will be both general and role specific. So, for example, front-line, supervisory and management staff will require a core of knowledge and skills in common, but also some technical competencies that are unique to particular tasks.

Career Paths

Careers in public health need to be attractive, with opportunities for professional growth and appropriate remuneration. Public health practitioners must be able to move between various parts of the system. In addition, workers should be able to gain familiarity with other systems through exchanges and secondments and have options for part-time or full-time employment.

Comprehensive Training

Public Health training programs must provide comprehensive coverage. This means educating an adequate number of practitioners, educators and researchers from a wide range of disciplines. As well, those participating in the workshop called for:

- ◆ Training that is competency-based, that encompasses both academic and practical aspects, and that takes place in academic and practice-based settings.
- ◆ Multilevel training options, including formal degree (bachelor, master, doctorate), diploma, and continuing education programs, offered in a variety of formats.
- ◆ Training in emerging areas such as public health informatics, human and microbial genomics, laboratory sciences, health risk modelling, organizational/leadership skills, policy, knowledge management, communications, and ethics.
- ◆ Incorporating new skills and knowledge into practice through the use of mentorships or apprenticeships.
- ◆ Programs that are supported by relevant professional organizations as well as employers.
- ◆ Incorporation of public health training in programs for other disciplines as well as the addition of a global focus to attract international students and to permit Canadian practitioners to participate in public health in the wider world.
- ◆ Development of non-degree programs might be especially suitable for rural, remote, or Aboriginal communities. In some cases allowing individuals to begin working in public health under appropriate supervision would provide immediate coverage and might motivate the pursuit of further education.

Distance and Continuing Education

A lack of investment in technology within public health limits the delivery of computer-mediated distance education, which Curran et al. (2003) note is more costly than face-to-face delivery. These authors suggest that partnering among institutions or organizations would allow a higher level of infrastructure and avoid duplication.

However, in some areas, learners may not have access to technology, may need instruction in order to utilize the available technology or may not have support and maintenance staff to keep systems in working order (Curran et al., 2006). Additional considerations include the following:

- ◆ The public health workforce is older and may be reluctant to embrace new technologies. Many programs are offered only in English, making access for francophone workers difficult.
- ◆ Continuing education programs need to include both general and specialized topics and be available in a variety of formats (on-line, teleconferencing, summer school, etc.).
- ◆ Practitioners need to be able to access a listing of available continuing education opportunities, as well as job openings.

Institutional/Jurisdictional Barriers

Although health is primarily a provincial responsibility, the public health system, of necessity, is broader in scope. The distribution of public health issues across jurisdictions means that practitioners face a number of governmental and institutional barriers in accessing continuing education. Of principal importance are the following:

- ◆ There is a lack of leadership in focussing on public health issues and system development.
- ◆ Academic institutions are usually in competition with each other rather than committed to working collaboratively.
- ◆ Programs focus on formal degrees rather than continuing education needs of practitioners in the workforce.

Summary

In sum, the literature search was issue driven: core competencies, learning needs, collaborative partnerships, and community responsive capacity building. The

notion of core competencies is an important concept within public health, used both to determine training needs and to establish curricula content. Various public health stakeholders have identified sets of competencies that they deem to be core; there are overlaps between their lists, but not consensus about them. In part this reflects a recognition that a degree of context and role specificity is inherent within the public health domain.

There are two levels of learning needs; for those preparing to enter practice and the continuing education needs of those already working in the field. For the former, awareness of conditions in rural and Aboriginal settings is paramount. The latter face a number of challenges, many linked to the relative isolation of their practice environment. High costs, difficulty accessing programs, scheduling conflicts and techno-phobia are among the barriers cited. With respect to an educational collaboration, the requirements are clear: vision and a supportive institutional culture; leadership, planning and communication; infrastructure and capacity. Add to these, in the case of rural and Aboriginal communities, programming that is informed by consultation. This is a reciprocal process; it contributes to the communities' capacity as well as ensuring that the program content responds to needs.

Scan



This section describes the public health education currently available in Canada, either by way of a degree/diploma/certificate program, or through workplace training. As will become clear, there are numerous options – offered on a full and part-time basis, in a single or series of specialist courses, as in-service workshops and by conference attendance.

The formal programs were identified through the online directories posted by the Canadian Association of Universities and Colleges and the Association of Canadian Community Colleges. For present purposes, those labelled as *public health*, *population health* and *community health* were included in the scan, since these terms are often used interchangeably. Supplementary searches helped to find specific educational offerings in, respectively, Aboriginal health, applied health, community wellness, environmental health, health policy, health promotion, health studies, occupational safety, rural health, and veterinary/animal health.

Additional sources of information included *Public Health Education in Canada* (UBC Centre for Disease Control/ British Columbia Centre for Disease Control, 2004), and *Innovations in Education for Public Health* (Nevis Consulting Group, 2005). Further details about Aboriginal programs were obtained from the *Analysis of Aboriginal Health Careers, Education and Training Opportunities* and *Listing of Aboriginal Health Careers* (National Aboriginal Health Organization, 2003). Descriptions of public health education initiatives and educational consortium models, in Canada and abroad, were derived from web-based searches of information produced by educational institutions, public health agencies and public health associations.

Canadian Programs

Full programs of study in public health are offered at diploma, undergraduate, and graduate (master and doctorate) levels by institutes of higher learning across the country. When comparisons are made within each level, it is evident that the length of study, core competencies, and admission standards are similar. Still, the course work required, both core credits and electives, as well as any thesis, major projects and/or mandatory placements vary from one place to the next.

In addition, public health courses are available to students as electives within discipline specific or interdisciplinary programs. These offer the chance to take individual courses or obtain a specialization in public health while majoring in another area of study. Often programs of study in public health are closely allied with those in cognate disciplines, allowing the sharing of human, financial, and other resources.

For individuals already in the public health workforce, employers frequently join together to mount learning opportunities, such as workplace training, or to facilitate continuing education. Examples of collaborations occur intra- and inter-agency – sometimes involving post-secondary institutions, various levels of government and industry, as well as health care agencies and organization.

Graduate Programs

Canadian universities have adopted at least two approaches to offering graduate level education in public health. Some have developed full, stand-alone programs on the topic, while others make a series of relevant courses available to students wishing to acquire a public health specialization within a broader program of study. The graduate programs listed on the following pages either focus on or incorporate public health education into their curricula. The following points highlight what we found:

- ◆ Twenty-seven universities provide over 50 programs at either a Master or PhD level in population health/community health/health promotion/public health.

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- ◆ Two universities specify a rural and/or remote focus in program descriptions (Lakehead University and the University of Northern British Columbia).
 - ◆ Only four universities currently offer graduate degrees specifically titled as public health (Lakehead University, Simon Fraser University, University of Alberta and University of Montreal).
 - ◆ Three universities offer graduate degrees in veterinary medicine with a public health focus (Guelph, Prince Edward Island, Saskatchewan).
 - ◆ Many universities provide public health courses as part of graduate programs in health (Health administration, Health promotion, Health research, Community health or Population health).
 - ◆ It is possible to combine a public health focus with another graduate degree (e.g. the Public Health Sciences Department at the University of Toronto allows graduate students to take public health courses while completing graduate degrees in behavioural science, biostatistics, community health and epidemiology, community nutrition, epidemiology, family and community medicine, health promotion, and occupational and environmental health).
 - ◆ Three new graduate programs have been proposed or are waiting approval (MPH at the University of Waterloo, MSc in Population and Public Health at Simon Fraser, PhD in Community Health and Epidemiology at Queen's University); a rural and northern health program is also under development (PhD in Rural and Northern Health at Laurentian).
 - ◆ Most graduate health programs are offered on a full-time, residency-required basis, with the exception of post-graduate diploma or certificate programs, which are often offered on a part-time basis.
 - ◆ At the present time, graduate public health programs are available via distance education at only three universities (Athabaska, Lakehead, University of Northern British Columbia).

University	Graduate Programs
Athabasca University (Distance Education)	MHSc in Health Studies
Brock University	MA/MSc in Applied Health Sciences
Dalhousie University	MSc in Community Health/ Epidemiology /Preventive Medicine
	MA in Health Education
	MHSc in Applied Health Sciences Research (Atlantic Regional Training Centre)
Lakehead University	MD (Northern Ontario School of Medicine)
	MPH in Health Sciences or Nursing
	MPH in Nursing /Health Studies (Distance Education)
	Graduate Diploma in Health Services and Policy Research (Ontario Training Centre)
Laurentian University	PhD in Rural and Northern Health (proposed)
	MD (Northern Ontario School of Medicine)
	Graduate Diploma in Health Services and Policy Research (Ontario Training Centre)
McGill University	MSc/PhD in Occupational Health

University	Graduate Programs
McMaster University	MA in Health and Physical Activity Sciences
	MA/MSc/MScPI/MHSc in Environment and Health
	MSc/PhD in Health Research Methodology
	Graduate Diploma in Health Services and Policy Research (Ontario Training Centre)
Memorial University	MSc in Community Health/Medicine
	MHSc in Applied Health Sciences Research (Atlantic Regional Training Centre)
	MSc/Med in Applied Health Services Research
	MD/PhD in Community Health/ Preventive Medicine
	Graduate Diploma in Community Health
	Graduate Diploma in Health Professional Education
Queen's University	MA in Community Health/ Epidemiology
	PhD in Community Health/ Epidemiology (Proposed)
Simon Fraser University	MSc in Population/Public Health (proposed)

University	Graduate Programs
University of Alberta	MSc/PhD in Public Health Sciences
	MSc in Health Promotion
	Graduate Diploma in Health Promotion
University of British Columbia	MSc/MHSc/PhD in Health Care/ Epidemiology
	MSc/MHSc/PhD in Community Health/Preventive Medicine/Epidemiology
University of British Columbia	MSc/PhD in Health Care/Occupational Health
University of Calgary	MSc/PhD in Community Health
	PhD in Medical Sciences/Public Health
University of Guelph	MSc/PhD/DVM in Veterinary Science /Population Health
Université Laval	MSc/PhD in Epidemiology/Medicine
	MSc/PhD in Community Health/Medicine
University of Lethbridge	MSc in Health Sciences
University of Manitoba	MSc/MD/PhD in Community Health
	MSc/Med in Applied Health Sciences
	MSc/PhD in Epidemiology/ Biostatistics

University	Graduate Programs
University of Montreal	MSc/PhD in Community /Public Health
University of New Brunswick	MHSc in Applied Health Sciences Research (Atlantic Regional Training Centre)
University of Northern British	MD (Northern Medical Program)
	MSc in Community Health Sciences/ Preventive Medicine (Distance Education)
University of Ottawa	PhD in Population Health
	MSc in Epidemiology/Community Medicine
	Graduate Diploma in Health Services and Policy Research (Ontario Training Centre)
University of Prince Edward Island	MSc/PhD in Health Management, Veterinary Preventive Medicine/Public Health
	MHSc in Applied Health Sciences Research (Atlantic Regional Training Centre)
University of Saskatchewan	MSc/PhD in Community Health/ Preventive Medicine
	MSc/PhD in Community Health/ Epidemiology
	MSc/PhD/MVSc in Veterinary Preventive Medicine/Epidemiology/Public Health

University	Graduate Programs
University of Toronto	MHSc/MSc/MPh/PhD in Public Health
	MHSc/MSc/PhD in Environmental Health
	PhD in Health Care, Technology and Place
	PhD in Health Services and Policy Research
	MSc /PhD in Health Policy/Management
	MSc in Epidemiology/ Health Research
	MHSc in Community Health/ Epidemiology/Health Promotion
	MHSc/MSc in Occupational Health
	Graduate Diploma in Health Services and Policy Research (Ontario Training Centre)
	Graduate Diploma in Industrial Health
University of Victoria	MA in Policy and Practice in Health and Social Services
University of Waterloo	MSc/PhD Health Studies/ Gerontology/Population Health
	MA/MSc in Kinesiology and Health Studies
	MSc in Public Health (proposed)

University	Graduate Programs
York University	Graduate Diploma in Health Services and Policy Research (Ontario Training Centre)
	PhD in Kinesiology and Health Sciences

Undergraduate Programs

There are a large number of undergraduate programs offered in health sciences, kinesiology, nursing, or medicine within Canada. Most include courses with significant community health content, but few of these are specifically identified as being in public health. However, the undergraduate programs listed below either focus on or incorporate public health education in their curricula:

- ◆ Although public health may be part of many undergraduate programs, only one undergraduate program in Canada offers a major in public health (BA/BSc in Occupational and Public Health at Ryerson).
- ◆ Several undergraduate nursing programs include public health as part of their focus on rural and remote health issues (Dalhousie, University of Northern British Columbia, Saskatchewan); two undergraduate health sciences/pre-medicine programs also have a rural health focus (Memorial, Manitoba).
- ◆ A consortium of six Ontario Universities offers Nurse Practitioner Certification, with an Aboriginal health component (Lakehead, Laurentian, Ottawa, Ryerson, Western Ontario, Windsor).
- ◆ Certificates in Community Health Nursing in First Nations are provided through partnership arrangements between universities, First Nations organizations and Health Canada's First Nations and Inuit Health Branch (First Nations University,

University of Manitoba); two universities provide diplomas in Aboriginal/Indian Health Studies (University of Northern British Columbia, First Nations University).

- ◆ Three universities offer public health courses within interprofessional health and human services programs (Memorial, University of British Columbia, Queen's, University of Toronto); there is also an interprofessional engineering, policy and public health program at the University of British Columbia (Bridge Program).
- ◆ Three new undergraduate programs with specialization in public health and rural or remote issues have been proposed (BHSc in Aboriginal and Rural Health, BHSc in Environmental Health, both at the University of Northern British Columbia and HBA/BA in Health Sciences at Simon Fraser).

University	Undergraduate Programs
Athabasca University (Distance Education)	BHA in Health Administration
	Certificate in Health Development
	Certificate in Home Health Nursing
Brescia College	BHSc in Health Sciences
Brock University	BHSc in Applied Health Sciences
	BSc in Community Health Sciences
	HBA/BA in Community Health
Concordia College	BEH in Environmental Health
Dalhousie University	BSc in Health Education
	Diploma in Emergency Services Administration/Management
	Diploma in Health Services Administration

University	Undergraduate Programs
First Nations University of Canada	Certificate in Indian Health Studies
	Certificate in First Nations Community Health Nursing
	Certificate in Northern Health Sciences
	BA/Sc in Environmental Health
Lakehead University	Primary Care Nurse Practitioner Certificate
	Native Nurses Entry Program
Laurentian University	BSc in Health Sciences /Health Promotion
	Primary Care Nurse Practitioner Certificate
McGill University	Certificate in Health/Social Services Management
McMaster University	BHSc in Health Studies
	BSc in Health Sciences
	Diploma in Environment and Health
	Diploma in Occupational Health and Safety
Memorial University	BMed in Medicine
Queen's University	BSc in Physical and Health Education
	HBA/BA in Health Studies

University	Undergraduate Programs
Ryerson University	BAPSci/BSc in Occupational/Public Health
	BA/BSc in Public Health and Safety
	HBAAdmin in Health Services Administration
	Primary Care Nurse Practitioner Certificate
	Certificate in Health Services Management
	Certificate in Occupational Health and Safety
Simon Fraser University	HBA/BA in Health Sciences
	Certificate in Health and Fitness Studies
University of Alberta	Occupational Health and Safety Certificate
University of British Columbia	BSc in Environmental Health/Public Health Inspection
University of Manitoba	Special Pre-Medical/Pre-Professional Health Program for Aboriginal Students
University of Northern British Columbia	Certificate in Aboriginal Health Sciences
	BHSc in Aboriginal and Rural Health (proposed)
	BHSc in Environmental Health (proposed)

University	Undergraduate Programs
University of Ottawa	HBHSc in Health Sciences
	Primary Care Nurse Practitioner Certificate
University of Regina	Certificate in Indian Health Studies
	Certificate in Occupational Health and Safety
University of Toronto	BPHE in Physical Education and Health
	BSc in Environment and Health
	HBSc in Health Studies (Co-Op)
University of Waterloo	BHSc in Health Sciences/Health Promotion/Gerontology/Rural (Co-Op)
University of Western Ontario	BHSc in Health Sciences /HealthPromotion/Rural Health
	Primary Care Nurse Practitioner Certificate
	Certificate in Health Promotion/Education
University of Windsor	Primary Care Nurse Practitioner Certificate
York University	BA in Environmental and Health Studies
	BA in Health and Society
	BSc in Kinesiology and Health Science

University	Undergraduate Programs
York University	HBHSc in Health Policy/Health Management
	Certificate in Health Administration
	Certificate in Kinesiology and Health Science

College Programs

Canadian community colleges also foster public health knowledge and skills enhancement within the context of programs in nursing, health promotion, workplace safety, environmental health and occupational health. These programs are often designed to fill a particular workforce need. In sum, the situation in this post-secondary sector is as follows:

- ◆ Fifty-five colleges in Canada provide over 82 programs that have a public health focus.
- ◆ Eleven programs provide multidisciplinary (nursing, native/Indigenous community care and community health representative) diplomas/certificates in community health.
- ◆ Eleven colleges offer programs in occupational health and safety, at either a diploma or certificate level (Algonquin, Cambrian, Camosun, Centennial, College of the North Atlantic, Fanshawe, Fleming, Grant MacEwan, Medicine Hat, Saskatchewan Institute of Applied Science and Technology and University College of the Fraser Valley).
- ◆ Health programs with an Aboriginal focus are available at eight colleges (Cambrian, Confederation, First Nations Technical Institute, Saskatchewan Institute of Applied Science and Technology, St. Clair, St. Lawrence and Yellowquill).

- ◆ Quebec colleges also offer programs in health sciences, pure and applied, to prepare students for employment in public health agencies and organizations (e.g. Cégep de Drummondville, Cégep de Victoriaville, Collège André-Grasset, Collège de Sherbrooke, and Collège Laflèche).

College	Diploma/Certificate Programs
Algonquin College	Community Health Care /Multidisciplinary
	Community Nursing/RPN
	Fitness and Health Promotion
	Occupational Health/RN
	Occupational Health and Safety
	Pre-Health Safety
Assiniboine College	Comprehensive Health Care Aide
Aurora College	Community Health Representative
Bow Valley College	Health and Community Careers
Cambrian College	Fitness and Health Administration
	Native Community Care
	Native Community Worker/Wellness
Cambrian College	Occupational Health and Safety
Camosun College	Occupational Safety

College	Diploma/Certificate Programs
Canadore College	Environmental Technician
	Health Promotion/Multidisciplinary Post-Diploma
	Holistic Health Practices Post-Diploma
Centennial College	Community Nursing Post-Diploma
	Workplace Wellness and Health Promotion Post-Diploma
Champlain College	Health, Pure and Applied Sciences
Cégep de Drummondville	Health, Pure and Applied Sciences
Cégep de Saint-Félicien	Animal Health Technology
Cégep de Saint-Hyacinthe	Animal Health Technology
Cégep de Victoriaville	Health, Pure and Applied Sciences
Collège André-Grasset	Health, Pure and Applied Sciences
Collège Boréal	Fitness and Health Promotion
	Holistic Health Practitioner
	Pre-Health Sciences
Collège de Maisonneuve	Health, Pure and Applied Sciences

College	Diploma/Certificate Programs
Collège de Sherbrooke	Animal Health Technology
Collège Édouard-Montpetit	Health, Pure and Applied Sciences
Collège Laflèche	Health, Pure and Applied Sciences
	Animal Health Technology
Collège Lionel-Groulx	Animal Health Technology
College of the North Atlantic	Occupational Health and Safety
	Safety Engineering
Confederation College	Aboriginal Community Services Worker
Conestoga College	Community Nursing/RNA/RN
Durham College	Health and Safety
Fairview College	Animal Health Technology
Fanshawe College	Fitness and Health Promotion
	Health Services Management
	Occupational Health and Safety
First Nations Technical Institute	Indigenous Community Health Worker/Health and Environment
Fisheries and Marine Institute	Food Safety Advanced Diploma

College	Diploma/Certificate Programs
Fleming College	Occupational Health and Safety
Grant MacEwan College	Holistic Health Practitioner
	Occupational Health Nursing
Holland College	Safety Courses
Humber College	Fitness and Health Promotion
Kwantien College	Public Safety Communication
Lakeland College	Health Care Aide
	Animal Health Technology
Lambton College	Bachelor of Applied Technology (Environmental Health and Safety)
	Community Nursing
Loyalist College	Fitness and Health Promotion
Malaspina College	Continuing Health Care/Administration
Medicine Hat College	Community Nursing
	Health Care Administration
	Occupational Health and Safety
Niagara College	Fitness and Health Promotion
Norquest College	General Studies Health

College	Diploma/Certificate Programs
Northern Alberta Institute of Technology	Animal Health Technology
Nova Scotia Agricultural College	Animal Health Technology
Nunavut Arctic College	Community Health Representative
	Health Careers Access Program
Olds College	Animal Health Technology
Red River College	Animal Health Technology
Saskatchewan Indian Institute of Technologies	Community Health Representative
Saskatchewan Institute of Applied Science and Technology	Diabetes Education Advanced/Basic
	Occupational Health and Safety Practitioner
Sault College	Health and Safety Training
Seneca College	International Health Service
St. Clair College	General Arts and Science/Health
	Native Community Worker
St. Lawrence College	Indigenous Community Health Approaches
University College of the Fraser Valley	Occupational Health and Safety

College	Diploma/Certificate Programs
University College of the Cariboo	Public Safety Communications
Vanier College	Animal Health Technology
Yellowquill College	Community Health and Human Services
	Community Diabetes Worker Training
	First Nation Health Management Program

Aboriginal and Rural Programs

Over the past fifteen years Canadians have witnessed a growth in the number of educational initiatives designed to address either rural or Aboriginal health, including issues of public health. Not surprisingly, these tend to be located in institutions that have a substantial rural or remote catchment area, defined by geography or by choice.

- ◆ Three universities offer graduate level programs in Aboriginal and/or rural health (University of Northern British Columbia, Lakehead and Laurentian).
- ◆ BScN degrees with an Aboriginal/rural health focus are offered at three universities (Dalhousie, University of Northern British Columbia and Saskatchewan); a Native Nurses Entry Program is available at Lakehead.
- ◆ Lakehead-Laurentian Universities (Northern Ontario School of Medicine), Memorial University, the University of Manitoba and the University of Northern British Columbia (Northern Medical Program) offer undergraduate medical degrees offering placements in rural and northern settings.

- ◆ Four undergraduate programs with a focus on Aboriginal/rural health are available or proposed (Aboriginal /rural health and environmental health programs are under consideration at University of Northern British Columbia; and two health studies programs at Waterloo and Simon Fraser).
- ◆ Fourteen universities and colleges offer certificate/diploma programs specific to Aboriginal health (e.g. Aboriginal health sciences, First Nations community health nursing, northern health studies and native community care).

Institution	Degree/Diploma/Certificate
Dalhousie University	BScN in Arctic Nursing
First Nations University	Diploma in Aboriginal Health Sciences
	Certificate in First Nations Community Health Nursing
	Certificate in Northern Health Sciences
Lakehead University	MD (Northern Ontario School of Medicine)
	MPH in Health Sciences or Nursing
	Native Nurses Entry Program
Laurentian University	PhD in Rural and Northern Health (proposed)
	MD (Northern Ontario School of Medicine)
Memorial University	MD
University of Manitoba	MD

Institution	Degree/Diploma/Certificate
University of Northern British	MD (Northern Medical Program)
	MSc in Community Health Sciences/Preventive Medicine
	BScN in Rural and Remote Nursing
	Diploma in Aboriginal Health Sciences
	Certificate in Community Health Nursing
University of Northern British	BHSc in Aboriginal and Rural Health (proposed)
	BHSc in Environmental Health (proposed)
University of Regina	Certificate in Indian Health Studies
University of Saskatchewan	BScN
University of Waterloo	BHSc in Health Sciences/Health Promotion/Gerontology/Rural
Simon Fraser University	HBA/BA in Health Sciences
Cambrian College	Certificate in Native Community Care
Confederation College	Diploma in Aboriginal Community Services Worker
First Nations Technical Institute	Certificate in Indigenous Community Health

Institution	Degree/Diploma/Certificate
Nunavut Arctic College	Community Health Representative Diploma
Saskatchewan Institute of Applied Science and Technology	Community Health Representative Diploma
St. Clair College	Native Community Worker Certificate
St. Lawrence College	Certificate in Indigenous Community Health Approaches
Yellowquill College	Community Diabetes Worker Certificate

Workforce Training

Some specialized public health learning and continuing education opportunities are available to those currently in the health workforce, as well as to others who might be interested in the topics covered. Often these programs are endorsed by professional organizations and may qualify as continuing education credits essential to maintain certification. The following are the national or provincial programs identified.

Skills Enhancement for Public Health (PHAC)

- ◆ This skills-based modular training program, was developed by the Public Health Agency of Canada (PHAC), Surveillance Coordination program. It is intended to build capacity in public health across Canada (PHAC, 2005).

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- ◆ Modules, delivered through the Internet, are designed to increase workforce surveillance skills in local public health departments and regional health authorities across Canada. This includes public health nurses, inspectors, environmental health officers, health promoters, program managers, dental hygienists and other public health practitioners.
 - ◆ Current modules cover basic epidemiological concepts, measurement of health status, descriptive epidemiologic methods, epidemiology of chronic diseases, and outbreak investigation and management.
 - ◆ The program is endorsed by the Canadian Public Health Association. Participants can receive continuing education credits, if registered with Canadian Institute of Public Health Inspectors, Royal College of Physicians and Surgeons, or the Alberta Dental Hygienists Association. It also qualifies for credit in the MPH program at Lakehead University.

National Food Safety Training Program (NFSTP)

- ◆ The Canadian Restaurant and Foodservices Association (CRFA) developed the National Food Safety Training Program in response to a growing demand for food safety training for foodservice operators from coast-to-coast. (<http://www.crfa.ca/resourcecentre/foodsafety/nationalfoodsafetytrainingprogram.asp>)
- ◆ Designed to train and certify quick-service, full-service, chain and independent operators and employees to a national standard of food safety, NFSTP was launched in 2004. The program is available across Canada through a network of certified trainers. Six teaching modules and the NFSTP examination, are taught over two or more days.
- ◆ Based on the content of CRFA's Food Safety Code of Practice, NFSTP is a comprehensive review of food safety issues and safe food handling practices, including: food safety hazards (parts I and II), facilities and equipment design, control of hazards following the flow of food, sanitation and pest control, employee and visitor issues.

Public Health WORKS Speaker Series (Alberta)

- ◆ This continuing education initiative, delivered through Alberta's Capital Health Region (Edmonton), is designed to give public health professionals access to continuing education at an advanced level.
- ◆ Lectures are broadcast monthly, via telehealth, with topics emphasizing key areas of public health, including monitoring health, providing health information, communicable disease prevention and control, chronic disease, injury prevention, early childhood development, healthy aging, safe environments and disaster planning. Each session features a 45-minute presentation followed by a 15-minute question and answer period with the speaker. Sessions are CME credit approved.

Centre for Addiction and Mental Health (Ontario)

- ◆ The Centre for Addiction and Mental Health (CAMH), with central facilities in Toronto and 26 community locations across Ontario, supports clinical practice, health promotion, education and research in the fields of mental health and substance abuse.
- ◆ CAMH offers classroom courses, forums, workshops and events; online courses; resources for teachers and schools; resources for communities and organizations; continuing medical education; student placements; and fellowships, internships and postgraduate studies.
- ◆ Continuing education sessions are delivered in a variety of formats, including classroom courses, forums and on-line courses. Recent topics include: suicide across cultures, HIV/AIDS, gambling, early intervention in youth mental health and methadone maintenance treatment

Public Health Research, Education & Development Program (Ontario)

- ◆ The Public Health Research, Education & Development Program (PHRED) is a provincial education, training and research initiative designed to increase capacity within the public health system by providing leadership in public health research and education through strategic partnerships.

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- ◆ Programs are delivered through partnerships between the Ontario Ministry of Health and Long-Term Care, universities with public health programs, local boards of health and municipal public health partners. Cost sharing is 50/50 provincial/municipal. Currently, the PHRED program operates at five sites, each affiliated with universities or colleges: Hamilton (McMaster University-University of Guelph), Kingston (Queen's University), Middlesex-London (Brescia College-University of Western Ontario), Ottawa (University of Ottawa), and Sudbury (Laurentian University).
 - ◆ PHRED has a special role in facilitating regional or provincial continuous learning opportunities for both current and future public health practitioners in medicine, nursing, epidemiology, environmental studies, nutrition, child studies, gerontology and other related fields. The program also can assist boards of health in identifying effective learning strategies for staff development. As well, it can sponsor, promote or coordinate continuous learning opportunities at the regional or provincial level.

Gaps

While there are a considerable number of educational initiatives in public health, geared both to those preparing for a career and to people who are already employed, gaps in the coverage are apparent. In many ways these exist in the form of too few offerings of a specific type or format.

- ◆ Only two Canadian universities offer graduate level courses with a focus on rural and/or remote health (University of Northern British Columbia and Lakehead).
- ◆ Most degree programs in public health are offered on a full-time basis, although there are part-time options. Only three public health graduate programs are accessible through distance education (Lakehead, Simon Fraser, Waterloo).
- ◆ At the undergraduate level, while there are public health courses available at several institutions, there is only one program specific to public health (Ryerson).
- ◆ Although four medical programs provide rotations in rural/remote settings (Memorial, Northern Ontario School of Medicine, Manitoba, University of

Northern British Columbia), the majority of schools of medicine do not address rural and remote public health.

- ◆ Few university, college or workplace programs are offered online.
- ◆ Only two of Canada's graduate public health programs are accredited by the US Council on Public Health Education (University of Montreal, University of Ottawa). Other Canadian schools have applied for, but not yet received, accreditation.

Collaborative Health Education Models



Given the interest in exploring the possibility of a collaborative venture in rural and Aboriginal public health education, it is worth considering approaches already being used in inter-institutional health education efforts. The literature describes a number of collaborative education models which have application to public health. Some are discipline-specific and others are interdisciplinary in character; they include initiatives designed specifically for rural and Aboriginal communities. The examples included are drawn from a several jurisdictions, or in one instance across international boundaries.

Nurse Practitioner Program (Ontario)

- ◆ A consortium of 10 universities of the Council of Ontario University Programs in Nursing (COUPN) delivers a post-graduate certificate program by distance education to prepare nurses for extended practice (Cragg et al., 2003; van Soeren, 2000).
- ◆ COUPN and the program are not incorporated as legal entities; legal status is distributed among the universities.
- ◆ Funding is received centrally and redistributed; the deans and directors of the participating universities serve as a board of directors and make policy decisions; individual universities employ program coordinators and tutors; four coordinators,

one for each of the three regions in the province, as well as a French language coordinator.

- ◆ Students apply to and are registered at one university. Admission standards are uniform across sites, but students pay tuition and are subject to the academic regulations of their home university. A central data register is used.
- ◆ PLAR (Prior Learning Assessment and Recognition) was required by the government and allows nurse practitioners already in practice to challenge all or part of the program.
- ◆ Evaluations of the Ontario Nurse Practitioner Program (Cragg et al. 2003; van Soeren et al. 2000) identified a number of factors that contributed to the success of the consortium.
- ◆ Positive factors included equality among partners, a common purpose, similarities among partners, separate administration for the program, sustained funding and ongoing evaluation of the program.
- ◆ Negative factors, which impeded program development, included the necessity of obtaining agreement from ten deans and directors for any change in program or policy, the necessity for periodic renewal of funding, and administrative difficulties. Administrative problems occurred because universities had different ways of calculating credits and tuition, adjudicating appeals, and copyright policies.

Closer to Home Health Human Resources Initiative (Nunavut)

- ◆ Closer to Home is a major reform in health professional education in Nunavut, designed to address chronic shortages in health human resources by developing a home-grown workforce.
- ◆ It was created by Nunavut's Department of Health and Social Services as a 20-year plan to make the territory less dependant on recruits from the south, relying instead on more Nunavummiut to meet local health services needs.

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- ◆ Long-distance technology will be used to deliver some of the teaching (to minimize the amount of time students spend away from home) together with a mentorship program to help support new professionals as they enter and progress in their work.
 - ◆ Laddered programs will be developed to provide flexibility and credit for previous learning if students wish to advance in or shift careers.

Rocky Mountain Public Health Education Consortium (United States)

- ◆ Consortium provides specialized training to public health workers and those interested in a public health career in seven Western states (Alaska, Arizona, Colorado, New Mexico, Utah, Texas, Wyoming, and South Dakota) (Rocky Mountain Public Health Education Consortium, 2005).
- ◆ The overall goal is to increase accessibility and availability of Maternal and Child Health (MCH) public health continuing education courses. The consortium also seeks to enhance the leadership, scholarship and partnership skills of geographically isolated and under-served public health practitioners.
- ◆ Five training modules are delivered via distance education (WebCT): program planning and evaluation, building a system of care for children with special health care needs, cultural factors, adolescent health, and fundamentals of public health for MCH professionals. Modules are accredited by the Utah Nurses Association, the National Commission for Health Education Credentialing, the National Association of Social Workers (Utah), and the Commission on Dietetic Registration.
- ◆ The Rocky Mountain/Southwest MCH Public Health Summer Institute provides intensive interdisciplinary continuing education opportunities in MCH public health practice. Over the period of a week, participants have opportunities to learn new public health skills and methodologies, as well as network with colleagues.

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- ◆ The MCH Certificate Program is a 12-month graduate education program that uses a variety of learning methods. The curriculum for the certificate program incorporates the scientific basis of public health practice, including cultural competence and leadership skills, and is tailored to each individual trainee's learning needs and styles.

Consortium of Eastern Ohio Master of Public Health (United States)

- ◆ This consortium includes six institutions located in Eastern Ohio (University of Akron, Cleveland State University, Kent State University, Northeastern Ohio Universities College of Medicine, Ohio University and Youngstown State University) (Consortium of Eastern Ohio Master of Public Health, 2006).
- ◆ The consortium offers a general MPH degree, geared toward the working professional who would like to broaden his or her role in improving community health, enhance current job skills, or seek career advancement. Students are encouraged to move through the program as a cohort. The program is accredited by the Council on Education for Public Health.
- ◆ Core courses, two each semester for three semesters, are delivered by interactive videoconferencing on Saturdays, include public health concepts, social and behavioural sciences, epidemiology, biostatistics, health services administration and environmental health. Elective courses can be taken at any of the partner universities.
- ◆ Courses are generally team taught – faculty members for one course may come from different campuses, depending on their area of expertise in public health. Public health practitioners help plan or teach portions of courses.

APHA Public Health E-Learning Initiatives (United States)

- ◆ The American Public Health Association (APHA) has as goal to become a leader in providing continuing professional education to the public health workforce for re-licensure and recertification and to enable the public health workforce to provide health education to the public (Horton, 2000).
- ◆ The organization offers continuing education credits through the journal-based e-mail education program; credits are awarded to participants who read selected articles and pass an examination based on those articles, with the entire process completed at-a-distance.
- ◆ The APHA also developed a public health student e-mentoring pilot, which matched students to public health professionals in the field (Mahayosnanad, 2000). Other e-learning initiatives include broadcasts of APHA annual meeting to satellite sites where public health physicians, education specialists and nurses were able to receive continuing education credits.

Continuous Public Health Education for Nurses (European Union)

- ◆ Consortium developed by the European Union to support common program on health promotion, information, education and training for nurses employed in public health in the 15 EU nations (Danielson et al., 2005).
- ◆ Goal to provide continuous education for public health nurses, using a transfer credit system to facilitate student and teacher exchanges, along with program evaluation. The program is flexible, allowing students to take optional courses and do placements at different universities and in different countries.
- ◆ Program has six compulsory modules, representing a minimum of 130 hours of instruction: concepts of public health; policy, economy and administration; human and social sciences; needs assessment-epidemiology; health promotion and education; nursing and public health. An additional 70 hours are devoted

to optional modules chosen from a range of courses and 30 hours are allocated to placements.

- ◆ Sweden is the first jurisdiction to adopt and implement program, beginning with four universities. Members worked by correspondence, through teleconference and e-mail, as well as in person. The curriculum had to be adopted by boards of each university. Several teaching methods offered to promote flexible learning. Students meet in person once/module and write common exams.

Turning Points Initiative (United States)

- ◆ The Turning Points initiative, funded by Robert Wood Johnson Foundation, was developed to support collaborative and community-based public health partnerships that would enhance the capacity to address locally-identified health disparities (Sabol, 2002; Harrowe et al., 2002; Campbell and Conway, 2005).
- ◆ Programs are currently operating in 41 communities and tribal jurisdictions across 14 states. Community grantee partnerships are diverse (including rural, urban, Native American and other racial groups, as well as faith-based organizations and businesses).
- ◆ Each project is evaluated on a four-month cycle, using the standardized *Turning Points Dimensions* evaluation instrument to identify issues and areas for improvements.
- ◆ Recent evaluations of state and community initiatives (Robert Wood Johnson Foundation, 2004) revealed that the program has resulted in enhanced public health infrastructure and improved practice, as well as the development of mechanisms to eliminate disparities and augment public health resources.
- ◆ Evaluations of Turning Point initiatives in tribal communities suggest that the strategy can be used to address public health challenges by mobilizing communities, clarifying the role of public health, building trust, improving inter-agency communication, overcoming skepticism and building cohesive partnerships.

University of the Arctic (Circumpolar Nations)

- ◆ The University of the Arctic is a cooperative network of nearly 100 universities, colleges, and other organizations committed to higher education and research in the North. The university is a decentralized organization governed by a body of international representatives, with all administrative and support services distributed to the various member institutions.
- ◆ Undergraduate Studies programs focus on building human capital and knowledge about the North among its residents and others. These programs address the full continuum of learning through both traditional and new approaches, and implement life-long learning strategies to empower northerners with the tools needed to shape our own future. Undergraduate education programs are developed, in partnership with indigenous peoples, to support all northerners' needs for community development.
- ◆ The Circumpolar Studies Program (BCS) is a new way for students attending the University of the Arctic to learn about the North, with courses held in the classroom, online, in the field, and around the world.

Workplan



The following workplan is designed specially for the for the partner universities and is based on the discussion of the March 9th and 10th 2006 meeting held at Lakehead University. The workplan outlines i) a set of goals and guiding principles for a collaborative approach to address public health education and training needs in rural, northern and Aboriginal communities. ii) a set of strategies to facilitate the development of a collaborative program and iii) suggested time lines.

Vision

- ◆ To assist in building the capacity of populations in rural, remote and aboriginal communities to improve their own health.

Guiding Principles

In order to design a program that is comprehensive, flexible and accessible the following principles will guide its development:

- ◆ Collaboration among the participating universities is paramount to build on the existing strengths in programming and to enhance resources.

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- ◆ Community capacity is enhanced through community participation in undertaking education and research.
 - ◆ Recognizing that rural/Aboriginal communities have strengths and assets, the program should focus on these while addressing the disparities that exist.
 - ◆ Consultation with communities is based on listening, respecting community knowledge, and being responsive.

Plan of Action

Administrative Considerations:

- ◆ Determine the membership of the working committee to provide continuity in decision – making.
- ◆ Engage the support of other members of the university community for the development of a collaborative program; including a memorandum of understanding from each of the universities.
- ◆ Determine potential funding sources.
- ◆ Hire a project coordinator at an early stage of the project to facilitate its ongoing development. The committee to determine the roles and responsibilities, funding for the position and the university responsible for the hiring and supervision.

Needs Assessment :

- ◆ A first step in assessing the needs for a collaborative public health program is an assessment of geographical differences in health outcomes and health human resources related to northern rural and Aboriginal health. (completed).
- ◆ This review should inform the second stage of the needs assessment which is the consultations with stakeholders.

Stakeholder Consultations:

- ◆ The stakeholders identified are communities, national and regional Aboriginal groups and graduates of the existing programs at each of the universities in the consortium. Possible strategies for conducting the consultation are focus groups with leaders and with health care providers in communities, meetings with national Aboriginal organizations such as the Assembly of First Nations (AFN) and the Inuit Tapiriit Kanatami (ITK), and surveys of graduates of existing programs. Consultation should also occur at local or regional level and build on the community relationships already established with each university.

Inventory of Resources at Each University:

- ◆ Although an initial inventory of courses and areas of strength at each university has been completed, a more comprehensive inventory is required which includes the courses currently being taught, the level of the courses (graduate or under graduate, introductory or advanced), faculty members available to teach the courses, as well as researchers conducting studies in northern, rural and Aboriginal health.

Consortia Agreement:

- ◆ Prior to the formulation of a formal agreement among the university partners in the consortium, further information on the implementation of a consortium model is required. For example, tuition fees, cost sharing, course requirements, admission criteria, granting of degrees.

Delivery Model

- ◆ Further exploration and discussion is required on the most appropriate program delivery model to achieve the stated goal of assisting in building the capacity of populations in rural, remote and aboriginal communities to improve their own health.
- ◆ Several models have been considered such as web – based, co – op education, mixed methods delivery models which combine classroom, web-base or teleconferencing. Other models such as the summer institutes which require

concentrated blocks of time should also be considered. The consultations with stakeholder group should help to inform the decision about models of delivery.

Student Level

- ◆ Each university brings strengths in both graduate and undergraduate programming as well as professional development courses and presentations. However, there seems to be no clear decision about the level of the learner in the consortium program. The consultation with stakeholder should inform that decision.
- ◆ While programs for all levels may be a long term goal, a short term goal is to decide on one level initially and develop a plan for phasing in other levels. The development of this consortium suggests that the first programming to consider should be at the graduate level.

Communications Pathways

Internal

- ◆ An organizational framework which determines a centralized or decentralized model for decision - making should be established at an early stage of the consortium.

External

- ◆ Developing an approach for external communications includes a number of “target” groups and strategies. For example, gaining the support and possible participation of the wider university community (both administration and faculty); promoting the program to potential students; gaining the support and participation of the communities; and promoting the program to funding agencies. An integral part of the communication strategy is the development of the “image” including a program title, logo, a clear mission statement and written materials such as brochures.

Tentative Timelines for 2006 Workplan

	April-May	June-August	Sept-Oct	Nov-Dec
<i>Administration:</i>				
Determine committee membership	◆			
Engage support	◆			
Potential funding	◆			
Hire project coordinator		◆		
<i>Stakeholder Consultation:</i>				
Community consultation			◆	
Aboriginal community consultation			◆	
Graduate survey		◆		

	April-May	June-August	Sept-Oct	Nov-Dec
<i>Further Information:</i>				
Inventory of resources			◆	
Consortium agreement			◆	
<i>Decisions:</i>				
Delivery models			◆	
Student level		◆		
<i>Communication Strategies:</i>				
Internal	◆			
External		◆		
Program planning				◆
Development of pilot project				◆



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